

## PREDICTIVE ASSAY FOR IMMUNE RESPONSE

## ABSTRACT OF THE DISCLOSURE

The present invention relates to an *in vitro* method for determining the ability of a vaccine composition which comprises one or more antigens or a nucleic acid molecule which encodes one or more antigens to stimulate a T cell response. In one embodiment, the method comprises the steps of: (1) contacting antigen presenting cells in culture with a vaccine composition selected from among the group of vaccine compositions, thereby, if one or more of the antigens or nucleic acid molecules can be taken up and processed by the antigen presenting cells, producing one or more processed antigens; (2) contacting the antigen presenting cells with T cells under conditions sufficient for the T cells to respond to one or more of the processed antigens; (3) determining whether the T cells respond to one or more of the processed antigens; whereby if the T cells respond to one or more of the processed antigens, then the vaccine composition stimulates a T cell response; and (4) repeating steps (1), (2) and (3) with each vaccine composition in the group, thereby identifying vaccine compositions which stimulate a T cell response; and, if one or more of the vaccine compositions stimulates a T cell response, (5) selecting at least one vaccine composition which stimulates a T cell response for assessment in one or more animals and/or human subjects.